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Prevention of Skin Cancer by Reducing Exposure to UV Light through Educational and Policy Approaches in Primary Schools

Skin cancer is most common cancer in the United States. The strongest, preventable risk factor for developing skin cancer is exposure to the sun's ultraviolet (UV) rays. However, at least 50% of children do not protect themselves adequately from UV exposure. While knowledge of the risk of sun exposure and the use of sun screen and other forms of sun protection have improved over the past two decades, a gap still exists between knowledge and behavior. The question is then, what are effective strategies to improve children's sun protective behavior?

A systematic review of published studies, conducted on behalf of the Task Force on Community Preventive Services by a team of experts, found that educational and policy approaches in primary schools are effective in improving children's "covering up" behavior [i.e. wearing protective clothing such as a shirt, long pants, and hat]. Sunscreen use was considered a secondary outcome meaning that a change in sunscreen use alone would not result in a recommendation but it should have accompanied improvements in "covering up" behavior. Based on this review, the **Task Force recommends that this strategy be implemented on the basis of sufficient evidence of effectiveness.**

Background on educational and policy approaches in primary schools to decrease UV exposure

- Interventions in primary school settings were designed to increase sun-protective knowledge, attitudes, intentions, and behavior among children from kindergarten through eighth grade.
- Interventions focused on some combination of increasing application of sunscreen, scheduling activities to avoid peak sun hours, increasing availability of shade and encouraging children to play in shady areas, and encouraging children to wear sun-protective clothing and included at least one of the following activities:
 - Provision of information to children (e.g., instruction or small media [brochures, flyers, newsletters, informational letters or videos] or both)
 - Additional activities to influence children's behavior (e.g., modeling, demonstration, role playing)
 - Activities intended to change the knowledge, attitudes, or behavior of caregivers (i.e., teachers or parents)
 - Environmental or policy approaches (e.g., provision of sunscreen or shade, or scheduling outdoor activities to avoid hours of peak sunlight).

Findings from the systematic review

Search results:

- 6000+ titles and citations screened
- 159 articles reviewed
- 85 studies included in one of the 9 UV interventions to reduce UV exposure reviewed by the Task Force
- 20 qualifying studies
- Recommendation was based on sufficient evidence of improvement in children's sun-protective "covering up" behaviour [i.e. wearing protective clothing such as a shirt, long pants, and hat].
- Of 20 studies initially identified by the Task Force for review, 6 studies were determined to be within the best evidence subset. Among these 6 studies, the median relative increase in sun-protective "covering-up" behavior was 25% for studies using a concurrent control group.
- Limitations of this review included insufficient evidence to determine effectiveness of educational and policy approaches in primary schools in:
 - Improving other sun-protective behaviors (e.g. avoiding the sun) due to inconsistent evidence.
 - Decreasing sunburns because of only a single study, with limitations in design and execution.

Publications:

- **MMWR/Recommendations and Reports** – Fall 2003. A summary report on findings.

The Guide to Community Preventive Services (Community Guide) provides recommendations on population-based interventions to promote health and to prevent disease, injury, disability, and premature death, appropriate for use by communities and healthcare systems. For more information about the Community Guide (including links to publications and a variety of resources) see

www.thecommunityguide.org and for more information about Task Force findings on skin cancer prevention see www.thecommunityguide.org/cancer/

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